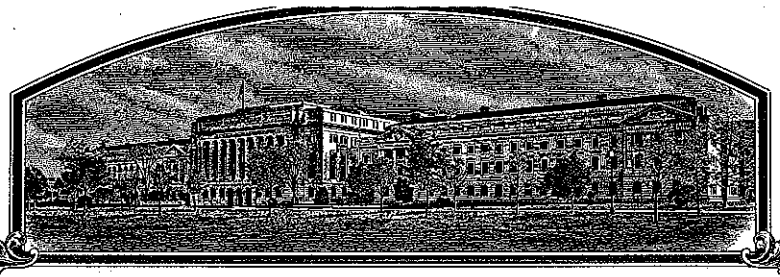

No. 200600289

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

The Samuel Roberts Noble Foundation, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE VE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT DED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

RYE

'Maton II'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-fifth day of February, in the year two thousand and eight.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
The Samuel Roberts Noble Foundation, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
NF65

3. VARIETY NAME
Maton II

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
2510 Sam Noble Parkway
Ardmore, Oklahoma 73401

5. TELEPHONE *(Include area code)*
580.224.6207

6. FAX *(Include area code)*
580.224.6808

FOR OFFICIAL USE ONLY

PVPO NUMBER
200600289

FILING DATE
SEPTEMBER 1, 2006

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Non-profit research

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
OK

9. DATE OF INCORPORATION
19 Sept 1945

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Steven Rhines
2510 Sam Noble Parkway
Ardmore, Oklahoma 73401

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 4,382.00
DATE 9/1/06

CERTIFICATION FEE:
$ 768.00
DATE 1-31-2008

11. TELEPHONE (Include area code)
580.224.6207

12. FAX (Include area code)
580.224.6208

13. E-MAIL
sprhines@noble.org

14. CROP KIND *(Common Name)*
Rye

16. FAMILY NAME *(Botanical)*
Gramineae

15. GENUS AND SPECIES NAME OF CROP
Secale cereale L.

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☒ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? *(OPTIONAL)*
☐ YES ☒ NO

IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of Variety
d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ Exhibit F. Declaration Regarding Deposit
g. ☒ Voucher Sample *(3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☐ Filing and Examination Fee ($4,382), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☐ YES *(If "yes", answer items 21 and 22 below)* ☒ NO *(If "no", go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☐ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☒ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
NAME *(Please print or type)* Steven Rhines		NAME *(Please print or type)*	
CAPACITY OR TITLE Vice President, General Counsel	DATE 24 August 2006	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)

ST-470 (02-06) designed by the Plant Variety Protection Office using Word 2003.

INSTRUCTIONS

200600289

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $3,652 ($432 filing fee and $3,220 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvpo/pvpindex.htm

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 http://www.ams.usda.gov/lsg/seed.htm.

ITEM

19a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

20. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

23. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

24. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

22. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

23. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

N/A

24. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

N/A

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

EXHIBIT A. Origin and Breeding History of the Variety:

Pedigree:

Maton II was developed by the Samuel Roberts Noble Foundation, Inc. It was tested as NF65 in the Foundation's variety trials and in state-wide variety trials at Texas, Louisiana, Alabama, Mississippi, Georgia and Florida. It has been licensed to TOPCO, Enid, OK for exclusive distribution.

Maton II was developed from a single cross, Polish-3 × 'Maton', made in 1990 at the Foundation's greenhouse. Polish-3 is an early fall-winter forage selection from germplasm originating from Poland. No further information is available in records as to the pedigree of this material.

Maton is a winter rye cultivar developed by The Noble Foundation and released in 1976 (Bates, 1979). Maton originated from a single, open pollinated plant selection from a space-planted F_2 population described as Tenn 4062. Tenn 4062 was a F_1 germplasm source population developed by the Tennessee Agricultural Experiment Station in 1965.

Details on Maton can be obtained from Bates, R.P. 1979. Registration of 'Maton' Rye. Crop Sci. 19:746.

Breeding history:

1990- Initial cross made in spring in the greenhouse at Noble Foundation, Ardmore, OK.

1991- F_1 plants grown in greenhouse. Seed from two plants was bulked to produce F_2 seed population. No selection.

1992- F_2 population grown in space-planted nursery under open pollination with selection for early vegetative growth habit, i.e., upright growth and tillering, winter survival and leaf rust resistance. Single plant selection.

1993- $F_{3:4}$ half-sib plant grown in space-plant nursery under open-pollination with the same selection criteria as stated above in the F_2. Individual plants were selected for advancement.

1994- $F_{4:5}$ Half-sib plant row evaluation at Ardmore, OK, under open-pollination. Individual rows were selected for advancement based on the same selection criteria as stated above in the F_2.

1995- $F_{5:6}$ Half-sib row number 65 grown under open-pollination at Ardmore was selected. Selection criteria were same as stated above in the F_2. Entire row was harvested for advancement to a preliminary forage screening trial.

1996- $F_{6:7}$ Unreplicated preliminary screening and fall forage clipping trial at one location. Open-pollinated seed was harvested from plot.

1997-2004: NF65 tested in Noble Foundation's small grains variety trials at two locations. Tests were structured to simulate a forage plus grain system and a forage only system. Purification seed blocks were grown in alternate years under isolation to provide seed for testing and multiplication.

2002-2004: NF65 tested in statewide forage trials in Alabama, Florida, Georgia, Louisiana and Texas.

2004-2006: Breeder seed and Foundation seed produced by the Noble Foundation at Burneyville, OK under open-pollination in isolation.

Selection criteria:

Maton II is an F_5 derived half-sib selection line. Primary selection criteria were early fall-winter forage production with emphasis on high tillering, upright growth habit, winter recovery and leaf rust resistance.

1997- F_1 plants - Seeds from two plants were harvested and bulked, no selection was done.
1998- F_2 population- Spaced-plants under open-pollination. Single plants selected for early vegetative growth habit, i.e., upright growth and high tillering, winter survival and leaf rust resistance.
1999- $F_{3:4}$ - Spaced-plants under open-pollination. Individual plants selected under the same selection criteria as stated above in the F_2.
2000- $F_{4:5}$ - Plant-row evaluation under open-pollination. Entire row selected under the same selection criteria as stated above in the F_2.
2001- $F_{5:6}$ - Row 65 of open-pollinated field at Ardmore was selected following the same selection criteria as stated above in the F_2. Entire row was harvested and seeds bulked.
2002- 2005: Forage and forage + grain yield evaluations. Plants clipped in fall, early-spring, spring, and/or summer. Seeds produced under open-pollination in isolation.

Stability and variants:

Maton II has been observed to be stable and uniform across multiple environments from 1997-98 to 2003-04 seasons (seven generations, Figure 1) as possible for a cross-pollinated crop variety. Before release, it was grown in multiple environments for nine generations and no variants or off-types were observed.

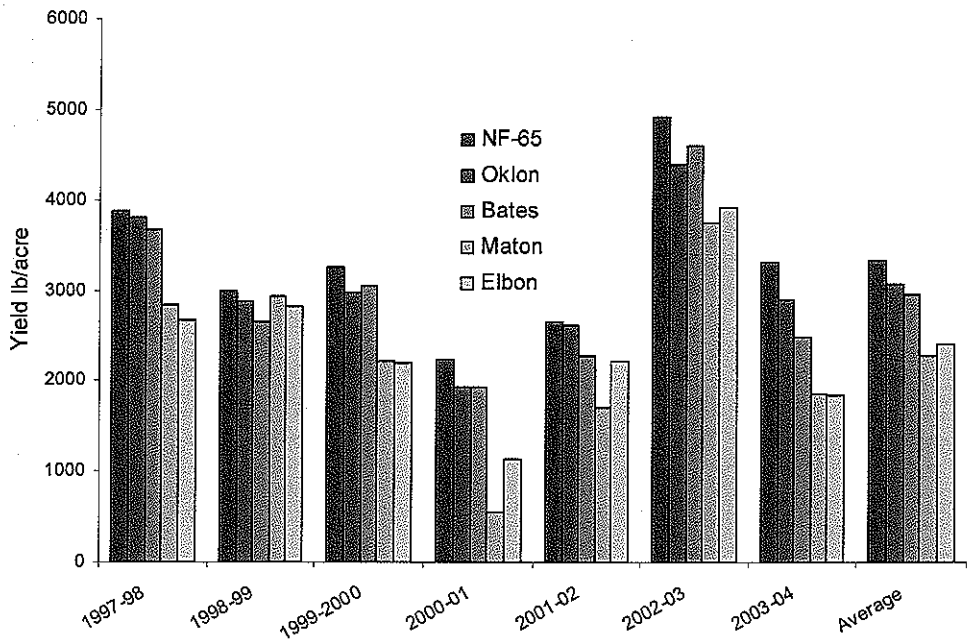

Figure 1. Early fall-winter (December - February) forage production of rye cultivars from 1997-98 to 2003-04 at Burneyville, OK. Maton II was the top early fall-winter forage producer across all the evaluations.

EXHIBIT B. Statement of Distinctness:

'Maton II' is most similar to 'Maton'. 'Maton II' differs from 'Maton' in possessing taller plant heights, higher number of nodes, and a longer leaf length when tested at two locations in Oklahoma (Table 1). 'Maton II' also possesses higher fall-winter forage production than 'Maton' by recording higher dry matter yields during that production time frame in 5 out of 6 years at Burneyville, OK and 3 out of 6 years at Ardmore, OK (Table 2). A phylogenetic analysis of rye cultivars also showed that 'Maton II' is in a distinct node from 'Maton' with a molecular marker similarity coefficient of only 0.79 (Figure 1). These results therefore indicate that 'Maton II' is genetically different from its parent 'Maton', probably due to genetic recombination that occurred during the reproductive process.

'Maton II' is also similar to 'Elbon' based on molecular marker similarity (Figure 1). However, 'Maton II' differs from 'Elbon' in possessing a taller plant height, a larger number of nodes, and a longer and wider leaf when tested at two locations in Oklahoma (Table 1). 'Maton II' also possesses higher fall-winter forage production than 'Elbon' by recording higher dry matter yields during that production time frame in 5 out of 6 years at Burneyville, OK and 3 out of 6 years at Ardmore, OK (Table 2).

Table 1. Morphological[a] characteristics of Maton II rye in comparison to the standard checks in Ardmore (HQF) and Burneyville (RRF), OK, USA.

Location	Cultivar	Stem diameter (mm)	Internode length (cm)	Plant height (cm)	Node number	Leaf length (cm)	Leaf width (cm)
HQF*							
	Maton II	4.22b[†]	12.08a	142.33a	5.20a	19.29a	10.97a
	Maton	4.12b	12.23a	140.07b	4.93b	16.95b	10.45ab
	Elbon	4.43a	11.70a	137.77c	4.93b	15.56c	10.28b
RRF*							
	Maton II	5.11a	13.64b	164.10a	5.62a	22.98a	13.11a
	Maton	4.64b	14.72a	160.38b	5.05b	20.03b	11.21b
	Elbon	4.56b	13.76b	147.48c	5.14b	18.68b	10.90b
Average							
	Maton II	4.59a	12.72ab	151.29a	5.37a	20.81a	11.86a
	Maton	4.34b	13.25a	148.43b	4.98b	18.22b	10.76b
	Elbon	4.48a	12.55b	141.76c	5.02b	16.84c	10.53b

[a] Morphological data were collected from experiments conducted at the Noble Foundation's Headquarters Farm (HQF) and the Red River Farm (RRF) in the southern Oklahoma. Cultivars were arranged in a randomized complete block design (RCBD) with three replications. Ten randomly selected plants from each replication were used to collect data on different morphological attributes. Data were analyzed following the Proc GLM procedure of SAS and means were separated using LSD values at probability P=0.05.

* HQF = Headquarters farm, Ardmore, OK; RRF = Red River farm, Burneyville, OK.

[†] For each column, mean values followed by the same letters are not significantly different (P= 0.05).

Table 2. Dry forage yield[b] (lb/ac) of rye cultivars at two locations in southern Oklahoma averaged across seven years of evaluation from 1998 to 2004.

Clipping/ Cultivar	Year					
	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04
*RRF**						
Fall-Winter						
Maton II	**3586a**[†]	**6150a**	**2677a**	**2403a**	**3091a**	**5438a**
Maton	**1682b**	**3999b**	**1955ab**	**591b**	**2035b**	**3716b**
Elbon	**1837b**	**3516b**	**1470b**	**667b**	**1629b**	**3043b**
Spring						
Maton II	**5553a**	**1646b**	**1376b**	**3013b**	**1965b**	**1084c**
Maton	**5169a**	**2799a**	**2382a**	**5423a**	**2893a**	**1769b**
Elbon	**4851a**	**3091a**	**2568a**	**5350a**	**3051a**	**2359a**
Total						
Maton II	9139a	7796a	4053a	5416a	5055a	6522a
Maton	6852b	6798a	4337a	6014a	4928a	5485ab
Elbon	6688b	6607a	4037a	6017a	4679a	5402b
*HQF**						
Fall-Winter						
Maton II	**4272a**	**3258a**	**2230a**	**2657a**	**4928a**	**4891a**
Maton	**4295a**	**2209b**	**558b**	**1709a**	**3756a**	**3340b**
Elbon	**4068a**	**2201b**	**1140b**	**2220a**	**3925a**	**2696b**
Spring						
Maton II	2808a	5371a	3326a	1924b	2936b	1291b
Maton	2341a	5754a	4562a	3114a	3582ab	2344a
Elbon	3319a	5554a	3672a	2930a	4305a	2377a
Total						
Maton II	7080a	8629a	5556a	4582a	7864a	6182a
Maton	7635a	7963a	5119a	4823a	7338a	5684a
Elbon	7387a	7755a	4812a	5149a	8229a	5073a

[b] Plots were arranged in a RCBD with three replications. Plantings were done within September 15-25 in each year. Individual plots were clipped when the plants attained a height of 8-10 inches. Yield obtained between November and March is considered as Fall-Winter yields and later harvests are considered as Spring yields. Statistical analysis is same as morphological traits.

* RRF = Red River farm, Burneyville, OK; HQF = Headquarters farm, Ardmore, OK.

[†] For each column, mean values followed by the same letters are not significantly different (P= 0.05).

20060289

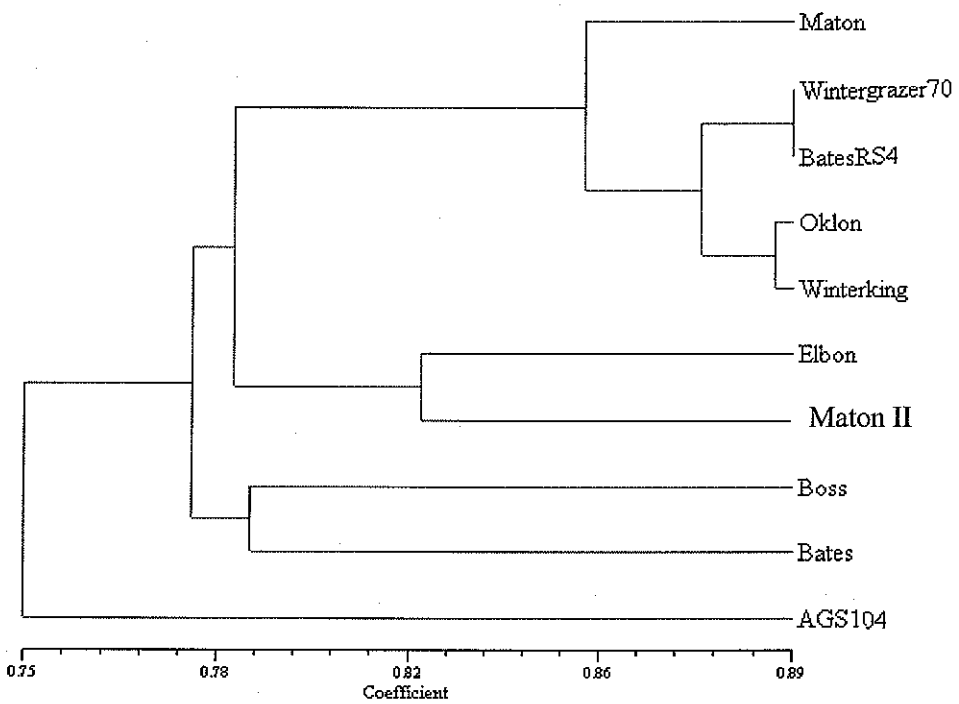

Figure 1. Relationship[a] among rye cultivars revealed by tall fescue EST-SSR markers[b].

[a] Phylogenetic analysis was made with 112 tall fescue (*Festuca arundinacea* Schreb.) EST-SSR markers. The DNA extraction and finger printing protocol were followed as described by Saha et al. (2004). Similarity matrices for the cultivars were calculated using NTSYS-PC 2.10 (Applied Biostatistics, Setauket, New York, USA) software. The genetic similarity among cultivars was calculated using the DICE similarity coefficient. For clustering, the SHAN (Sequential Agglomerative Hierarchical and Nested Clustering) was used to construct phenograms using the similarity coefficients.

[b] Details on primers list available upon request.
Primer information is also available at: Saha MC, Mian MAR, Eujayl I, Zwonitzer JC, Wang L, May GD (2004) Tall fescue EST-SSR markers with transferability across several grass species. Theor Appl Genet 109:783-791.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C

OBJECTIVE DESCRIPTION OF VARIETY
RYE (*Secale cereale L.*)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
The Samuel Roberts Noble Fdn, Inc.	NF65	Maton II

ADDRESS (*Street and No. or RD No., City, State, Zip Code, and Country*)

2510 Sam Noble Parkway
P.O. BOX 2180
Ardmore, OK 73401

FOR OFFICIAL USE ONLY

PVPO NUMBER

20600289

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the spaces below. Place a zero in the first space (e.g. 0 9 or 0 9 9) when number is either 99 or less or 9 or less, respectively. Characteristics described, including numerical measurements should represent those that are typical for the variety. All questions need not be answered; however, the more complete the information given the more adequate the variety will be identified.

1. PLOIDY

1 1 = Diploid (2n = 14) 2 = Tetraploid (2n = 28) 3 = Other (Specify) _____

2. ADAPTATION

2 1 = North 2 = South

3. GROWTH HABIT

3 1 = Spring 2 = Intermediate 3 = Winter

1 Photoperiod: 1 = Insensitive 2 = Sensitive

2 Juvenile Plant Growth: 1 = Erect 2 = Intermediate 3 = Prostrate

4. EAR EMERGENCE

0 5 Days Earlier Than	8	1 = Von Lochow	2 = Frontier	3 = Cougar
Emergence Same As		4 = Rymin	5 = Florida Black	6 = Weser
___ ___ Days Later Than		7 = Gator	8=Elbon	

5. MATURITY

2 1 = Very Early 2 = Early 3 = Mid-Season 4 = Late 5 = Very Late

0 3 Days Earlier Than	8	1 = Von Lochow	2 = Frontier	3 = Cougar
Maturity Same As		4 = Rymin	5 = Florida Black	6 = Weser
___ ___ Days Later Than		7 = Gator	8=Elbon	

MAH
10-6-2007

8

6. HEIGHT

1 5 3 cm High (at Maturity) 5

___ cm Shorter Than ..... ___

Height Same As ..... ___

1 0 cm Taller Than 8

1 = Dwarf 2 = Semi-Dwarf 3 = Short
4 = Mid-Tall 5 = Tall

1 = Von Lochow 2 = Frontier 3 = Cougar
4 = Rymin 5 = Florida Black 6 = Weser
7 = Gator 8=Elbon

7. STEM

0 5 mm Stem Diameter (4 inches above ground) 2 Nodes: 1 = Solid 2 = Intermediate 3 = Hollow

1 Neck Hairiness: 1 = Glabrous 2 = Slightly Hairy 3 = Moderately Hairy 4 = Densely Hairy

1 Anthocyanin In Uppermost Node: 1 = Absent 2 = Present

1 2 9 cm Internode Length (Between flag leaf and leaf below)

___ More Tillers Than ..... ___

Same Number of Tillers As 5

___ Fewer Tillers Than ..... ___

1 = Von Lochow 2 = Weser 3 = Frontier
4 = Tetra Petkus 5=Elbon

Resistance to Lodging: 1 = Good (Seldom lodged) 2 = Fair (Often lodged) 3 = Poor (Usually lodged)

8. LEAVES

2 1 0 cm Leaf Length (1st leaf below flag leaf) 1 2 mm Leaf Width (1st leaf below flag leaf)

2 Flag Leaf: 1 = Not Twisted 2 = Twisted ___ No. Leaves Originating from Nodes Above Ground

2 Waxy Bloom On Leaf (at boot): 1 = Absent 2 = Slightly Waxy 3 = Waxy

1 Upper Leaf Surface (at boot): 1 = Glabrous 2 = Lightly Spinous 3 = Pubescent

1 Leaf Color (at boot): 1 = Dark Green (Frontier, Weser) 2 = Light Green (Florida Black) 3 = Other (Specify) _____

1 Main Stem Leaf Habit (during tillering): 1 = Upright 2 = Recurved 3 = Drooping

1 Main Stem Leaf Habit (at boot): 1 = Upright 2 = Recurved 3 = Drooping

1 Leaf Sheath (at boot): 1 = Glabrous 2 = Lightly Spinous 3 = Pubescent

1 Anthocyanin in Auricles: 1 = Absent 2 = Present

9. HEAD

2 Density: 1 = Lax (Frontier) 2 = Mid-Dense (Tetra Petkus) 3 = Dense (Cougar)

2 Attitude: 1 = Erect 2 = Slightly Curved 3 = Inclined

1 Shape: 1 = Fusiform (Tapering) 2 = Parallel 3 = Oblong 4 = Elliptical 5 = Clavate 6 = Other (Specify) _____

2 Waxy Bloom: 1 = Absent 2 = Slightly Waxy 3 = Waxy

1 Anthocyanin: 1 = Absent 2 = Present

2 Resistance to Shattering: 1 = Good 2 = Fair 3 = Poor

3 Head Length: 1 = Long 2 = Mid-Long to Long 3 = Mid-Long 4 = Short to Mid-Long 5 = Short

1 3.9 cm Head Length (Excluding Awns) 0 2.6 cm Awn Length

0 8 mm Head Width

1 Anthocyanin in Awns: 1 = Absent 2 = Slightly Pigmented 3 = Strongly Pigmented

10. COLEOPTILE COLOR

2 1 = Green 2 = Red (Purple) 3 = Mixed

11. SEED

Color (Total = 100%)

002 % Black	029 % Gray	___ % Blue	___ % Blue-Green
___ % Green	___ % Olive-Green	___ % Yellow	___ % Tan
022 % Brown	047 % Other (Specify) Light Brown		___ % Other (Specify) ___

1 Aleurone Color: 1 = Colorless (White) 2 = Blue

1 Endosperm: 1 = Light 2 = Dark 3 = Mixed

1 Shape: 1 = Eliptical 2 = Fusiform 3 = Other (Specify) ___

1 Size: 1 = Small (Caribou) 2 = Medium (Puma) 3 = Large (Rymin) 4 = Very Large (Tetra Petkus)

2.3 mm Wide 06.9 mm Long 1 Surface: 1 = Smooth 2 = Other (Specify) ___

12. DISEASE AND INSECT RESISTANCE (0 = Not Tested 1 = Susceptible 2 = Resistant. Indicate as completely as possible including species and races where known)

	Comments
2 Leaf rust – *Puccinia recondita*	Leaf rust-intermediate resistance to prevalent races under Oklahoma field conditions.
0 Stem rust – *P. graminis secalis*	
2 Stripe rust – *P. glumarum*	Stripe rust-rating based on national infectations under Oklahoma field conditions.
2 Powdery mildew – *Erysiphe graminis secalis*	
0 Anthracnose – *Colletotrichum graminicola*	Powdery mildew-rating based on natural infestation of thedisease under Oklahoma field conditions
0 Scald – *Rhyncosporium secalis*	
0 Ergot – *Claviceps purpurea*	
___ Other Disease ___	
___ Other Disease ___	
___ Insect ___	
___ Insect ___	

13. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THE APPLICATOIN VARIETY FOR THE FOLLOWING CHARACTERS:

Character	Variety	Character	Variety
Growth Habit	Maton	Tillering	Maton
Leaf Width	Oklon	Ear Emergence	Oklon
Leaf Length	Oklon	Area of Adaptation	Oklon
Leaf Color	Maton	Winter Hardiness	Oklon
Leaf Carriage	Maton	Drought Resistance	Maton
Seed Shape	Maton	Lodging	Maton
Seed Size	Oklon	Shattering	Maton

14. ADDITIONAL DESCRIPTION (Use additional sheets as required):

Describe all characteristics that cannot be adequately described in the form above. Comparative varieties should be used where appropriate, such as for disease. Append all comparative trial and evaluatoin data. Rye is a cross-pollinated crop and therfore, variation exists within cultivars and/or populations for a number of traits. Like most rye cultivars, Maton II expresses considerable variability for many traits. In the development of this cultivar, our primary objective and interest was early fall-winter vegetative growth and overall total forage production potential which is enhanced by this inherant variability.

Exhibit D

'Maton II' RYE

Jerry Baker, Malay Saha, Joe Bouton
Forage Improvement Division
The Samuel Roberts Noble Foundation
2510 Sam Noble Parkway, Ardmore, OK 73401

The Small Grain Breeding Program is an integral part of efforts to develop cultivars suitable for improved forage production in the southern Great Plains. Distribution of forage yield is as important as total forage yield. Early fall-winter forage production is particularly valuable as it allows producers better flexibility for earlier grazing or increased stockpiling. Livestock producers usually spend a dollar per day per cow during the time from last week of October to November. Thus, the major objective for the small grain breeding program is to develop cultivars with early fall-winter forage yield potential.

'Maton II' was developed by the Samuel Roberts Noble Foundation, Inc. and has been tested in Oklahoma, Texas, Louisiana, Alabama, and Florida. It is developed from a cross between 'Polish 3' x 'Maton' made in 1990. An individual F_2 space plant selection made in 1992 was evaluated and increased in progeny rows from 1993 to 1996 at Ardmore, OK. The strain was selected and tested in the 1996-1997 preliminary forage trials at Ardmore as 'NF 65'. 'Polish 3' is an early fall-winter forage selection from germplasm originating from Poland. 'Maton' is an established cultivar with superior total forage production, disease resistance, winter hardiness and tillering capacity in the southern Great Plains.

'Maton II' is a winter rye that is adapted well in southern Oklahoma, north and east Texas, and Louisiana. Morphological and agronomic attributes are very similar to 'Elbon' and 'Maton' (cultivars released from the Foundation) except it has bigger leaves, thicker stems, slightly taller plants, and more nodes per plant (Table 1). It has shorter indernodes than 'Maton' and 'Wrens 96' but longer than 'Elbon'. Winter hardiness of 'Maton II' was similar to both 'Maton' and 'Oklon' at Ardmore and Burneyville of OK. 'Maton II' forage contains about the same crude protein as other forage ryes. No consistent differences have been noted in lodging, disease and insect resistance between 'Maton II' and the 'Maton' and 'Oklon' cultivars.

Table 1. Characteristics of Maton II rye tested at two locations in southern Oklahoma against some check cultivars.

Line/ Cultivar	Leaf length (cm)	Leaf width (mm)	Stem diameter (mm)	Internode length (cm)	Plant height (cm)	Number of nodes
Maton II	21.06	12.01	4.67	12.86	153	5.40
Elbon	17.05	10.56	4.50	12.73	143	5.04
Maton	18.42	10.79	4.38	13.47	150	4.99
Wrens 96	-	-	4.55	12.97	157	4.93

Maton II has produced more total forage than the commonly grown cultivars in the southern Oklahoma (Figure 1). During seven years of testing (1997-2004) at Ardmore and Burneyville, OK, Maton II averaged 55% greater fall and winter forage and 6% greater total forage than 'Maton'. During the same period, early forage yield of Maton II was 10% greater than 'Oklon' with 9% more total forage production. Seed production averaged 10% less than 'Maton' but 1% more than 'Oklon'.

The total forage yield of Maton II is the highest in the southern Oklahoma and Louisiana trials and fairly comparable in other three locations (Table 2). It is especially suitable for

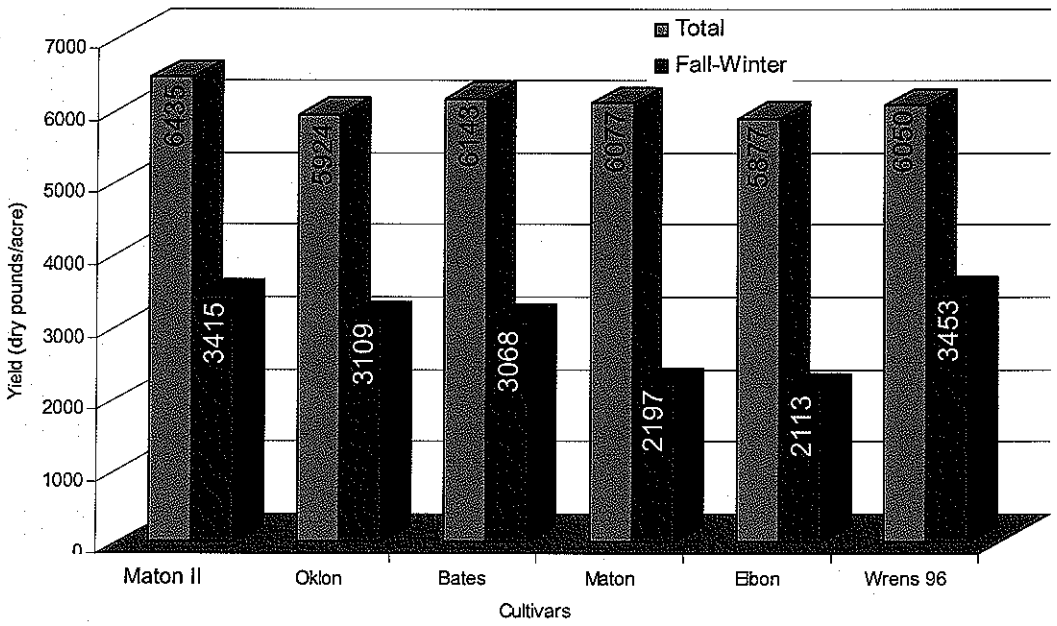

Figure 1. Total and fall-winter yield potential of rye cultivars in Oklahoma. Yields were averaged across seven years performance at two locations, Ardmore and Burneyville.

Table 2. Multi-year total forage yield of rye cultivars in Oklahoma and other southern states.

Cultivars	Ardmore, OK	Burneville, OK	Overton TX	Louisiana[a]	Alabama[b]	Georgia[c] -Florida
Maton II	6202	6668	6108	3908	4868	5294
Oklon	5533	6315	6055	3749	5309	5530
Bates	5971	6314	6309	3854	4958	5688
Maton	5667	6486	6116	3729	5199	-
Elbon	5418	6336	6302	3972	5270	-
Early Graze	-	-	-	-	5091	5262
Wrens 96	5959	6142	-	-	-	5016
Wintergrazer70	-	-	6415	3813	4763	5630
Wintermore	-	-	6194	-	-	5793
Wrens Abruzzi	-	-	-	-	4326	4938
AGS 104	-	-	-	-	-	4910

Average of [a] two locations, [b] nine locations, [c] four locations

the light textured soils. It out yielded all the check varieties on the sandy-loam soils at Burneyville, OK (red river valley). Maton II produced 3% to 9% more total dry forage than 'Maton' and 'Wrens 96', respectively at that location. However, the main advantage of Maton II is its' early fall-winter forage potential.

Maton II out yielded all the cultivars under comparison except 'Wrens 96' for early fall-winter forage production in the southern Great Plains (Table 3). Maton II produced more than 39% fall-winter dry forage production over 'Maton' and 'Elbon' the common cultivars grown in the southern Great Plains. In two out of three comparisons for early

Table 3. Multi-year summary of fall-winter forage yields of rye cultivars.

Cultivars	Ardmore, OK	Burneyville, OK	Oberton TX	Louisiana[a]	Alabama[b]	Georgia[c] -Florida
Maton II	3503	3326	2884	1611	2266	2603
Oklon	3152	3067	2737	1356	2159	2426
Bates	3186	2949	2857	1138	1866	2767
Maton	2126	2268	2314	925	1764	-
Elbon	1827	2400	2083	1073	1760	-
Early Graze	-	-	-	-	2290	2725
Wrens 96	3675	3231	-	-	-	2586
Wintergrazer70	-	-	2813	1381	2393	2227
Wintermore	-	-	2823	-	-	2400
Wrens Abruzzi	-	-	-	-	2269	2689
AGS 104	-	-	-	-	-	2782

Average of [a] two locations, [b] nine locations, [c] four locations

forage production in Oklahoma and Georgia-Florida it out yielded 'Wrens 96' (Table 3). Early production of 'Wrens 96' fluctuated intensely over years but Maton II was fairly stable (Figure 2) over seven years of testing at Burneyville, OK. Early fall-winter forage

Figure 2. Early fall-forage production of different rye cultivars over seven years at Burneyville, OK.

yield comprised approximately half of the total forage production which is much higher percentage in comparison to 'Maton' and 'Elbon' and fairly comparable with other check cultivars (Table 4).

Table 4. Percent fall-winter forage yield to the total of rye cultivars at different locations.

Cultivars	Ardmore, OK	Burneyville, OK	Oberton TX	Louisiana[a]	Alabama[b]	Georgia[c] -Florida
Maton II	56	50	47	44	47	49
Oklon	57	48	45	36	41	44
Bates	53	47	45	29	38	49
Maton	38	35	38	25	34	-
Elbon	34	38	33	27	33	-
Early Graze	-	-	-	-	45	52
Wrens 96	62	53	-	-	-	52
Wintergrazer70	-	-	44	36	50	40
Wintermore	-	-	45	-	-	41
Wrens Abruzzi	-	-	-	-	52	54
AGS 104	-	-	-	-	-	57

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
The Samuel Roberts Noble Foundation, Inc.	NF65	Maton II
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(Include area code)*	**6. FAX** *(Include area code)*
2510 Sam Noble Parkway Ardmore, Oklahoma 73401	580.224.6207	580.224.6208
	7. PVPO NUMBER 200600289	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** [✓] YES [ ] NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** [X] YES [ ] NO

10. Is the applicant the original owner? [X] YES [ ] NO **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
[ ] YES [ ] NO **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
[ ] YES [ ] NO **If no, give name of country**

11. Additional explanation on ownership *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

Breeder is an employee of The Samuel Roberts Noble Foundation. Consistent with Foundation policy, employees are required to assign their interest in any work-derived intellectual property to The Foundation.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	TEMPORARY OR EXPERIMENTAL DESIGNATION
The Samuel Roberts Noble Foundation, Inc.	2510 Sam Noble Parkway Ardmore, Oklahoma 73401	NF65 **VARIETY NAME** Maton II
NAME OF OWNER REPRESENTATIVE (S)	**ADDRESS** *(Street and No. or RD No., City, State, and Zip Code and Country)*	FOR OFFICIAL USE ONLY
Steven Rhines	2510 Sam Noble Parkway Ardmore, Oklahoma 73401	**PVPO NUMBER** 200600289

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Signature

31 AUG 06
Date